



K22U 2343

Reg. No. : .....

Name : .....

**V Semester B.Sc. Degree (CBCSS – OBE-Regular/Supplementary/  
Improvement) Examination, November 2022  
(2019 Admission Onwards)  
CORE COURSE IN ZOOLOGY  
5B07 ZLG : Biochemistry and Biophysics**

Time : 3 Hours

Max. Marks : 40

**Instruction : Give illustrations and figures wherever necessary.**

I. Essay questions. **Each** question carries **8** marks. Answer **any two**.

- 1) Comment on the principle and working of Electron microscope. Add a note on the types of Electron Microscope.
- 2) Give an account on Electron Transport System (ETS).
- 3) Briefly explain the principle and applications of centrifugation. Comment on the different types of centrifuge.
- 4) Write an essay on vitamins and their deficiency diseases. (2×8=16)

II. Short essay questions. **Each** question carries **4** marks. Answer **any two**.

- 5) Explain the different methods used for the measurement of radioactivity.
- 6) Briefly explain the classification of enzymes.
- 7) Comment on the different structural levels of proteins. (2×4=8)

III. Short answer questions. **Each** question carries **2** marks. Answer **any six**.

- 8) Comment on Michaelis-Menten equation.
- 9) Comment on PAGE in biophysics.
- 10) What are prostaglandins ?
- 11) Comment on the chemiosmotic hypothesis.
- 12) Comment on oil immersion objective.
- 13) What are catecholamine hormones ? Give two examples.
- 14) Comment on the principle and uses of Phase contrast microscope.
- 15) Differentiate between glycogenolysis and glycogenesis. (6×2=12)

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IV. Multiple choice questions. **Each** question carries **0.5** marks. Answer **all**.

- 16) Lecithin and cephalin are examples of
  - a) Phospholipids
  - b) Glycolipids
  - c) Prostaglandins
  - d) Steroids
- 17) Beer-Lambert law is the working principle of
  - a) Centrifuge
  - b) Electrophoresis
  - c) Spectrophotometer
  - d) Gama counter
- 18) In Krebs' cycle, acetyl coenzyme A condenses with oxaloacetic acid to form
  - a) Malic acid
  - b) Alpha keto gutaric acid
  - c) Succinic acid
  - d) Citric acid
- 19) Within the cells, the site of ATP synthesis is
  - a) Mitochondrial matrix
  - b) Rough endoplasmic reticulum
  - c) F0-F1 complex
  - d) Cytoplasm
- 20) Oxytocin and vasopressin are examples of \_\_\_\_\_ hormones.
  - a) Catecholamines
  - b) Steroid
  - c) Peptide
  - d) Protein
- 21) Which among the following type of enzyme inhibition can be reversed by the addition of more substrate ?
  - a) Competitive
  - b) Non competitive
  - c) Feed back
  - d) Allosteric
- 22) The technique used for the identification of aminoacids in a mixture is
  - a) Centrifugation
  - b) Paper chromatography
  - c) Colorimetry
  - d) Homogenization
- 23) Cobalt-60 is a radioactive isotope. It can be used in the treatment of
  - a) Cancer
  - b) Hyperthyridism
  - c) Diabetes mellites
  - d) AIDS(8×0.5=4)